2023
TP-153

Course Specification
(Bachelor)

Course Title:	Introduction to Electrical Engineering
Course Code:	EE1201
Program:	Electrical Engineering
Department:	Electrical Engineering
College:	College of Engineering
Institution:	Imam Mohammad Ibn Saud Islamic University
Version:	V5
Last Revision Date:	01-01-2025

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (0)					
2. Course type					
A.	☐University	☐College	☒ Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (3rd level, 2nd year)					
4. Course general Description:					
This course offers students a broad introduction to the field of Electrical Engineering (EE), providing insights into the diverse areas they will encounter during their academic and professional journey. Students will be familiarized with basic electrical engineering equipment, safety guidelines, and laboratory procedures. They will also gain practical exposure to workshop technologies, including welding, soldering, and handling basic electrical tools. Additionally, this course promotes a sense of teamwork, ethics, and professionalism. Through interactive sessions and workshops, students will understand the importance of core electrical engineering subjects, practical applications, and professional responsibilities, setting a foundation for their future coursework.					
5. Pre-requirements for this course (if any)**:**					
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6. Co-requisites for this course (if any)**:**					
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7. Course Main Objective(s):					
• Provide an overview of the key fields in electrical engineering and the relevant courses students will take. • Train students to handle basic tools and equipment (e.g., multimeters, soldering kits) and follow safety procedures. • Emphasize the importance of safety, teamwork, and ethics in engineering practice. • Provide exposure to basic software tools and practical applications to ease their transition into core EE subjects.					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	15	100%
2	E-learning	-	-
3	Hybrid	-	-

No	Mode of Instruction	Contact Hours	Percentage
	• Traditional classroom • E-learning		
4	Distance learning	-	-

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	15
2.	**Laboratory/Studio**	-
3.	**Field**	-
4.	**Tutorial**	-
5.	**Others (specify)**	-
Total		15

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
K1	Identify different fields in Electrical Engineering and describe their applications.	1.1	Lectures	Class discussions, participation
2.0	**Skills**			
S1	Apply basic workshop skills like soldering and welding.	2.1	Hands-on practice	Workshop sessions
S2	Handle electrical equipment and follow safety procedures.	6.1	Hands-on practice	Lab/workshop exercises, participation
3.0	**Values, autonomy, and responsibility**			
V3	Exhibit teamwork, ethics, and professionalism.	4.3	Group tasks	Group activities, peer evaluation

C. Course Content

No	List of Topics	Contact Hours
1	Introduction to Electrical Engineering: Overview of fields: Power, Electronics, Communication, Control, etc.	1
2	Academic Journey: Expectations from EE coursework and career paths.	1
3	Basic Lab Equipment: Introduction to multimeters, oscilloscopes, and power supplies.	1
4	Safety Guidelines: Safety protocols in labs and workshops	1
5	Introduction to Soldering: Practical soldering techniques and safety.	1
6	Wire Handling: Wire cutting, stripping, and crimping techniques	1
7	Welding Basics: Introduction to basic welding techniques and equipment.	1
8	Group Activity: Teamwork and collaboration exercise.	1
9	Overview of Power and Energy Systems: Introduction to power generation and distribution.	1
10	Electronics and Communication Systems: Overview of circuits, communication, and embedded systems.	1
11	Ethics and Professionalism: Ethics, sustainability, and engineering professionalism.	1
12	Workshop on Troubleshooting: Basic troubleshooting techniques for circuits.	1
13	Software Tools in EE: Overview of MATLAB, PSPICE, and other simulation tools.	1
14	Course Review: Summary of the course content and final discussion.	1
15	Reflection and Feedback: Course evaluation and reflection session.	1
Total		**15**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Attendance and participation	--	40%
2.	Group activities and exercises	--	30%
3.	Reflection/ Feedback Report	--	30%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Equipment datasheet and manuals
Supportive References	--
Electronic Materials	--
Other Learning Materials	--

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	One classroom: fits up to 25 students with white board.
Technology equipment (projector, smart board, software)	A laptop computer connected to a projector to display PowerPoint presentations
Other equipment (depending on the nature of the specialty)	• **Equipment:** Multimeters, oscilloscopes, soldering kits, wire cutters, and welding equipment. • **Safety Gear:** Gloves, goggles, and aprons. • **Software Tools:** Overview of MATLAB, PSPICE, and Arduino IDE for future courses.

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Indirect
Effectiveness of Students assessment	Students	Indirect
Quality of learning resources	Relevant Focus Group	Indirect
The extent to which CLOs have been achieved	Dept. Quality Committee	Direct
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	
REFERENCE NO.	
DATE	